

REMARKS/ARGUMENTS

Claims 1-3, 5-7, and 9-20 are currently pending. Claims 1-3, 5-7, and 9-20 stand rejected. By this amendment, independent claims 1 and 14 are amended. Support for the added limitations is found on page 6, lines 22-26 of the specification, page 12, lines 15-24 of the specification and in the original (and still pending) claims 11 and 13.

Claim 9 is amended to explicitly recite the selection of anions and/or cations in buffer to assure elimination of contamination of product from byproduct moieties. Support for the limitation is found on page 11, line 15 of the specification.

Applicant's invention

The instant invention provides a method for continuously and automatically maintaining the pH of the internal compartments of an electrodialysis stack. This is achieved through the addition of a buffer, the components of which make up part of the product being generated by the method. (It should be noted that the acid-loop and base-loop solutions are the product streams in the invented method.)

No art of record anticipates or suggests using a buffer whose components are those of the product formed. No art of record anticipates or suggests adding buffer to product stream to neutralize byproduct acid or byproduct base produced during the ED process. This feature essentially eliminates the potential for contamination of the product from these byproducts.

"Acid Loop" and "Base Loop" Are Product Streams

Claims 1-3, 5-7, and 9-20 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Mani, U.S. 6,627,016 (hereinafter "Mani") in view of Scheder, U.S. Patent No. 3,595,766 (hereinafter "Scheder").

Applicants appreciate the comments made by the Examiner during the June 24, 2008 interview. Those comments, related to more explicitly claiming the existence of product and byproduct moieties, are incorporated in independent claims 1 and 14.

Applicants further appreciate the Examiner's comments found on page three, first full paragraph of the Official Action, as the statement there revealed that the Applicants failed to fully explain the invention.

A salient feature of the instant method, as stated on page 11 lines 12-13 of the specification is that selection of the buffer depends upon the product being made in the acid-loop and/or base loops of the ED stack. Specifically, the buffer cation or anion is a feedstock of the targeted product.

For example, as explained on page 8, lines 22-27, and depicted in FIG. 4, the anion of a buffer containing acetate ($\text{HC}_2\text{H}_3\text{O}_2$) becomes part of the metal acetate product $\text{MC}_2\text{H}_3\text{O}_2$ emerging from that base loop 13 (i.e. one of the product loops).

Conversely, "if borates are to be synthesized in the base compartment of the ED cell 18, the use of a boric acid/borax buffer in the "acid loop" compartment of the cell would be preferred since there would be less chance of contaminating the product..." Page 11, lines 13-15 of the specification.

Neither Mani or Scheder alone or combined, suggest using buffer whose components become part of the product. Also, and as stated earlier in this prosecution, the art of record teaches away from adding buffer to product streams.


The results are instant or near instant adjustment of pH (as previously claimed) so as to avoid pH swings of more than a point or two. Indeed, and as previously noted, Mani allows for pH swings of 6.5 units. And Scheder cannot add buffer to its acid or base loop streams (i.e., its product streams) for fear of contaminating the whey it produces there.

In light of the foregoing, Applicant submits that, as amended, the claims are now allowable. Withdrawal of the rejection and allowance of all the currently-pending claims is respectfully solicited.

An earnest attempt has been made hereby to respond to the January 24, 2008 Official Action. All claims are deemed in condition for allowance. If the Examiner feels that a telephonic interview will expedite allowance he is respectfully urged to contact the undersigned. Claims 1-3, 5-7, and 9-20 currently are pending in the application.

Dated: June 24, 2008

Respectfully submitted,
CHERSKOV & FLAYNIK

A handwritten signature in black ink, appearing to read "Michael J. Cherskov", written over a horizontal line.

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